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**THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE
AMENDMENTS TO THE CLAIMS OF THE INTERNATIONAL
APPLICATION UNDER PCT ARTICLE 19:**

AMENDED SHEETS (Pages 66 & 67).

[44] A computer storage medium that stores a control program for execution on a computer, which, when executed by the computer, controls a plasma processing apparatus for performing a process on a substrate having a metal-containing film formed thereon, so as to execute a cleaning method for cleaning a process chamber in the plasma processing apparatus, wherein the method comprises measuring luminescence intensity of radicals that increase with progress of cleaning within the process chamber, and detecting a cleaning end point from values thus obtained.

[45] A plasma processing apparatus comprising:

a plasma supply source configured to generate plasma;

a process container that defines a process chamber for performing a process on a substrate by the plasma;

a substrate table configured to place the substrate thereon within the process container;

exhaust means for decreasing pressure inside the process container;

gas supply means for supplying a gas into the process container; and

a control section configured to conduct control to execute a cleaning method for cleaning a process chamber in a plasma processing apparatus for performing a process on a substrate having a metal-containing film formed thereon, wherein the method comprises measuring luminescence intensity of radicals that increase with progress of cleaning within the process chamber, and detecting a

cleaning end point from values thus obtained.

[46] (added) The cleaning end point detecting method according to claim 31, wherein the hydrogen radicals have a wavelength of 656 nm.